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| **gold** | **Chemistry** | **شعار-القسم** |
| **Properties and uses of metals** |
| Worksheet-2- |

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| --- | --- |
| Name: Class: 8 /……........ | |
| Book pages: | |
|  | Date:15-4-2012 |
| 8.13.10 | Core Standard number |
| 1. Link the properties and uses of gold, silver, copper, iron and aluminium .  2. Explain in terms of particles theory ductility and malleability of metals.  3.Know how and why alloys are formed. | Learning Objectives  Logo + text 2 |

1- Main uses of some metals

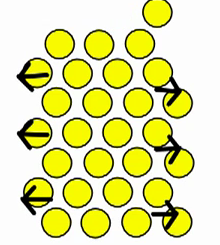
Complete the following table

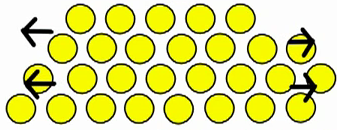
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| --- | --- | --- |
| Metal | Properties | Uses |
| Gold | Gold does not react with air (not corrode), never lost shine and soft. | Jewellery, decoration, electrical circuits |
| Silver | Highest reflectivity of light, soft. | Jewellery, cutlery and ornaments. |
| Copper | Soft can be shaped, does not react with water. | Water pipes, kitchen pan, wire that conducts electricity, alloyed with tin to make bronze. |
| Aluminum | Soft, weak, light in weight and non-toxic. | Overhead power cables, kitchen pans. Alloyed with copper to form material for aircraft and truck. |

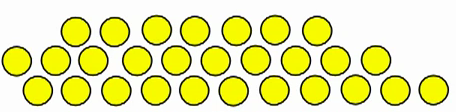
2- Explain in terms of particle theory ductility and malleability of metals.

a- Metals are made up of layers that can slide over one another. So when the metal is hammered certain layers slide .

b- Describe the following pictures







Particles of the metal slide over one another.

3- a- How alloys are formed?

An alloy is a mixture of a metal with other elements.

b- Why alloys?

The properties of a metal are often improved.

Alloys usually have different properties from those of the component elements.

c-complete the following table

|  |  |  |  |
| --- | --- | --- | --- |
| alloy | Mixture of metals | Improved properties | uses |
| Steel | Iron + carbon | Stronger than pure iron | Girders for building, car bodies |
| Solder | Tin and lead | Lower melting point than pure metal | Connecting electrical circuits |
| duralumin | Aluminum + copper | Lighter than copper, stronger than aluminum | Aeroplane bodies, alloy wheels |
| Brass | Copper + zinc | Brass has higher malleability than bronze or zinc | Decoration, electrical applications |
| Bronze | Copper + tin | more resistant to wear than unalloyed copper | Electrical connectors and springs. |